

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-5, 7-10, 12, 16, 18, 19 and 22 are currently being amended. Claims 1, 8 and 12 were amended to correct typographical errors.

This amendment changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-22 are now pending in this application.

Amendments to the Specification

The title of the specification was amended to correct a typographical error.

Claim Objections

Claims 2-5, 7 and 16 were objected to for various informalities. In response, Applicant has amended claims 2-5, 7 and 16 to correct informalities. Specifically, Claims 2-5 and 7 were amended to correct an antecedent basis error and Claims 4 and 16 were amended for clarity. Thus, Applicant requests that the objection be withdrawn.

Claim Rejections under 35 U.S.C. § 103

On pages 2-3 of the Office Action the Examiner rejected Claims 1-3 and 5-8 as being obvious over U.S. Patent No. 4,777,402 titled “Thin Film EL Display Device Having Multiple EL Layers” to Mitsumori (“Mitsumori”) in view of U.S. Patent No. 6,252,356 titled “Dispersed Multicolor Electroluminescent Lamp and Electroluminescent Lamp Unit Employing Thereof” to Tanabe (“Tanabe”) under 35 U.S.C. § 103(a). On page 6 of the Office Action the Examiner rejected Claim 4 as being obvious over Mitsumori in view of

Tanabe, further in view of U.S. Patent No. 6,191,764 "Method of Driving Display Device" to Kono ("Kono").

The Examiner stated that:

Mitsumori teaches a display device of the thin-film electroluminescent display type (Prior Art Fig. 3), comprising: a first layer 8 having an electroluminescent material, a second layer forming a transparent front electrode 10 a third layer having at least one first rear electrode 6 , the first layer being between the second layer and the third layer, a fourth layer behind the third layer and having an electroluminescent material 4; and a fifth layer with at least one second rear electrode 2 (see col. 1, lines 30-50).

However, the Examiner acknowledged that Mitsumori does not disclose:

[A] fifth layer with at least one second rear electrode masking an area which is not covered by the first rear electrode.

The Examiner stated that Tanabe discloses:

[A] second rear electrode 26 (Fig. 7) masking an area which is not covered by the first rear electrode 28 (col. 5 ,line 52 to col. 6, line 50, wherein the electrode area 26 is the area covered by the small portions 26A and 26B only and the electrode area 28 is the area covered by the small portions 28A and 28B only; Also see Abstract) in order to display multiple patterns (Abstract; claim 6, col. 6, lines 50-57).

The Examiner concluded that:

[I]t would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the display device, as disclosed by Tanabe, in the device of Mitsumori in order to display multiple patterns.

Mitsumori and Tanabe do not identically disclose the combination of elements recited in independent Claim 1. Mitsumori is directed to a thin film EL display device having multiple layers. *See Abstract.* Tanabe is directed to an electroluminescent lamp unit having a transparent electrode layer which is electrically separated into two or more regions which enables the display of multiple patterns in multiple luminescent colors using one dispersed EL lamp. *See Abstract.*

Claim 1 (as amended) is in independent form and recites a “display device of the thin-film electroluminescent display type” comprising, in combination with other elements, “a second layer forming a transparent front electrode” and “a fifth layer with at least one second rear electrode masking an area which is not covered by the first rear electrode.” Claims 2-8 depend from independent Claim 1 (as amended).

Mitsumori and Tanabe do not identically disclose a display “comprising, in combination with other elements, “a second layer forming a transparent front electrode” and “a fifth layer with at least one second rear electrode masking an area which is not covered by the first rear electrode.” In rejecting Claim 1, the Office Action states that the element 10 shown in Figure 3 of Mitsumori meets the limitation of “a second layer forming a transparent front electrode” as claimed in Claim 1. However, Mitsumori teaches that element 10 is an “opposing electrode film,” which it does not disclose as being transparent and thus cannot be a “transparent front electrode” as claimed in Claim 1. *See Col. 1, line 39.* Tanabe fails to cure this deficiency. Thus, the combination of Mitsumori and Tanabe fail to disclose “a second layer forming a transparent front electrode” as claimed in Claim 1.

Accordingly, the rejection of Claim 1 over Mitsumori in view of Tanabe under 35 U.S.C. § 103(a) is improper. Therefore, Claim 1 is patentable over Mitsumori in view of Tanabe.

Dependent Claims 2-8, which depend from independent Claim 1, are also patentable. See 35 U.S.C. § 112 ¶ 4.

Concerning Claim 4, the Examiner stated that:

The above combination is silent regarding the first electrode having several hollow areas, and the fifth layer has second electrodes shaped so as to be complementary to the said hollow areas such that the first and second electrodes together mask all of the display background. In the same field of endeavor, Kono teaches an organic Electroluminescent device wherein the electrode has several hollow areas (electrodes 19 in Fig. ; col. 3, lines 20-31) in order for them to map with the pixel pattern (col. 3, lines 20-31). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the electrode structure, as disclosed by Kono, in the device of the previous

combination in order to map with the pixel pattern. Further, the combination does not teach that the fifth layer has second electrodes shaped so as to be complementary to the said hollow areas such that the first and second electrodes together mask all of the display background. The previous combination teaches that the second electrodes mask the single hollow area of the electrode.

However, as set forth above, the combination of Mitsumori and Tanabe fail to disclose, teach or suggest “a second layer forming a transparent front electrode” as claimed in Claim 1. Further, Kono fails to cure the deficiencies of Mitsumori and Tanabe.

Accordingly, the rejection of Claim 4 over Mitsumori in view of Tanabe and Kono under 35 U.S.C. § 103(a) is improper.

Thus, the Applicant respectfully requests withdrawal of the rejection of Claims 1-8 under 35 U.S.C. § 103(a).

Claim Rejections under 35 U.S.C. § 102

On pages 7-10 of the Office Action, the Examiner rejected Claims 9-22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,252,356 titled “Dispersed Multicolor Electroluminescent Lamp and Electroluminescent Lamp Unit Employing Thereof” to Tanabe (“Tanabe”).

The Examiner stated that:

Regarding claim 9, Tanabe teaches a display device (Fig. 7) comprising: luminescent material (19, 22); electrodes (26,28) configured to control illumination of the luminescent material such that the luminescent material can be controlled to display information; wherein all of a display background can be controlled to be illuminated by luminescent material (see col. 8, col. 3, lines 38 to col. 4, lines 67 and col. 5, lines 53 to col. 6, lines 50).

Regarding claim 17, Tanabe inherently teaches a display device (Fig. 7), wherein the luminescent material can be controlled such that no areas are visible between portions of the luminescent material controllable to display information (since the luminescent layers 19 and 22 appear as small patches, instead of a full layer of luminescent material).

Regarding claim 18, see rejection in claims 9 and 17.

Regarding claim 22, Tanabe teaches a display device (Fig. 7) for use in an automobile, comprising: a first electroluminescent active element 22 located in a first plane and a second electroluminescent active element 19 located in a second plane different than the first plane (col. 8).

Tanabe does not identically disclose the combination of elements recited in independent Claims 9, 18 and 22. Tanabe is directed to an electroluminescent lamp unit having a transparent electrode layer which is electrically separated into two or more regions which enables the display of multiple patterns in multiple luminescent colors using one dispersed EL lamp. *See Abstract.*

Claim 9, as amended, is in independent form and recites a “display device” comprising, in combination with other elements, a “first layer comprising first luminescent material; and a second layer comprising second luminescent material; wherein the second luminescent material may be controlled to be illuminated to mask a space in the first luminescent material.” Claims 10-17 depend from amended independent Claim 9.

Claim 18 is in independent form and recites a “display device” comprising, in combination with other elements, a “first layer having first luminescent material; and a second layer having second luminescent material, wherein the second luminescent material may be controlled to be illuminated to mask a space in the first luminescent material.” Claims 19-21 depend from amended independent Claim 18.

Claim 22 is in independent form and recites a “display device for use in an automobile” comprising, in combination with other elements, a first and second electroluminescent active element “wherein the second electroluminescent active element masks a space in the first electroluminescent active element.”

Tanabe does not identically disclose a “display device” comprising, among other elements, a “first layer having first luminescent material; and a second layer having second luminescent material, wherein the second luminescent material may be controlled to be illuminated to mask a space in the first luminescent material” as recited in amended independent Claims 9 and 18. For example, Tanabe does not disclose a first luminescent

material with “a space” that is masked by a second luminescent material. In addition, Tanabe does not identically disclose a “display device” comprising, among other elements a first and second electroluminescent active element “wherein the second electroluminescent active element masks a space in the first electroluminescent active element” as claimed in amended independent Claim 22. For example, Tanabe does not disclose a first electroluminescent active element with “a space” that is masked by a second electroluminescent active element.

In rejecting Claims 9-22, the Office Action states that elements 22 and 19 of Fig. 7 meet the limitation of a first and second luminescent materials. In addition, the Office Action states that elements 22 and 19 of Fig. 7 meet the limitation of first and second electroluminescent active elements. Applicant disagrees.

Element 22 is a phosphor layer having a region 22A corresponding to a text light-emitter and a region 22B corresponding to a background light-emitter. *See Col. 3, lines 61-66.* Element 19 is a phosphor layer formed from a region 19A corresponding to a text light-emitter and a region 19B corresponding to a background light-emitter. *See Col. 3, lines 55-58.* However, Tanabe does not teach that element 22 has “a space” that is masked by element 19. For example, as shown in Fig. 7, the arrangement of element 22 is continuous without a gap or space. Thus, it is not possible for element 19 to mask a space in element 22 as required by independent Claims 9, 18 and 22.

Thus, Tanabe fails to disclose a “display device” comprising, in combination with other elements, a “first layer comprising first luminescent material; and a second layer comprising second luminescent material; wherein the second luminescent material may be controlled to be illuminated to mask a space in the first luminescent material” as claimed in amended Claim 9, a “display device” comprising, in combination with other elements, a “first layer having first luminescent material; and a second layer having second luminescent material, wherein the second luminescent material may be controlled to be illuminated to mask a space in the first luminescent material” as claimed in amended Claim 18 or a “display device for use in an automobile” comprising, in combination with other elements, a first and second electroluminescent active element “wherein the second electroluminescent active

element masks a space in the first electroluminescent active element" as claimed in amended Claim 22.

Accordingly, the rejection of Claims 9, 18 and 22 over Tanabe is improper. Thus, Claims 9, 18 and 22 are patentable over Tanabe.

Dependent Claims 10-17 which depend from independent Claim 9 and dependent Claims 19-21 which depend from independent Claim 18, respectively, are also patentable. See 35 U.S.C. § 112 ¶ 4.

The Applicant respectfully requests withdrawal of the rejection of Claims 9-22 under 35 U.S.C. § 102(b).

* * *

It is submitted that each outstanding objection and rejection to the Application has been overcome, and that the Application is in a condition for allowance. The Applicant requests consideration and allowance of all pending Claims 1-22.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or

even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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